

U.S. Application Serial No. 10/655,985
Attorney Docket: 46107-0091
Response to Office Action of June 6, 2006

REMARKS

This document is in response to the Office Action dated June 6, 2006, wherein the Examiner:

- (i) rejected claims 2-9, 11, and 12 under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter, and
- (ii) indicated that claims 13, 14, 16, 17, 19 and 20 are allowed.

Applicants have thoroughly reviewed the Office Action including the Examiner's remarks and the references cited therein. Applicants wish to extend their thanks to the Examiner for allowing claims 13, 14, 16, 17, 19 and 20. The following remarks are fully responsive to the Office Action and are believed to render all claims at issue patentably distinguishable over the cited references.

Rejections under 35 U.S.C. § 101

Applicants respectfully disagree with the Examiner that the claimed invention is directed to non-statutory subject matter. Applicants wish to direct the Examiner to MPEP 2106, and specifically section IV(B)(2)(b) thereof entitled "Statutory Process Claims". As stated in this section, a claimed process is clearly statutory if it involves manipulation of data representing physical objects or activities. See Id. The claimed process involves manipulation of data (i.e., "ionization voltage") that represents the physical activity of the combustion in a combustion chamber. For this reason, Applicants respectfully submit that the invention as provided for by claims 2-9, 11 and 12 falls within this "safe harbor" and is, therefore, statutory subject matter.

As additional evidence that the claimed invention falls within this "safe harbor" provision, the first example of this type of statutory subject matter described in this section of the MPEP is analogous to the presented claims. This example is reproduced immediately below:

Examples of this type of claimed statutory process include the following:

- A method of using a computer processor to analyze electrical signals and data representative of human cardiac activity by converting the signals to time segments, applying the time segments in reverse order to a high pass filter means, using the computer processor to determine the amplitude of the high pass filter's output, and using the computer processor to compare the value to a predetermined value. In this example the data is an intangible representation of physical activity, i.e., human cardiac activity. The transformation occurs when heart activity is measured and an

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electrical signal is produced. This process has real world value in predicting vulnerability to ventricular tachycardia immediately after a heart attack.

See Id. Similar to the example above, the claimed invention analyzes electrical signals and data (i.e., "detecting an ionization voltage"), manipulates the electrical signals and data in various ways (i.e., "integrating said ionization voltage over a spark window"), and then compares the manipulated data to a predetermined value (i.e., "comparing said integrated ionization voltage with a threshold"). In the claimed invention, the data is an intangible representation of a physical phenomenon (i.e., the ignition or lack of ignition in a combustion chamber). The transformation occurs when the ionization voltage is detected and an electrical signal is produced, which is very similar to the example in the MPEP. The claimed process, similar to the example, has real world value in determining whether an open-secondary winding condition exists.

Furthermore, Applicants respectfully submit that the Examiner is incorrect when he says that "[t]he result of detecting an open secondary winding (claims 3, 11) are [sic] not outputted or displayed to a user or stored for later use" (See pg. 2 of the Office Action). Applicants respectfully submit that the limitation in claims 3 and 11 reading "setting an open secondary flag" comprise storing the results of the claimed process. The result of the process is the determination of whether or not an open secondary winding condition exists in a combustion chamber. The claimed process sets a flag when the open secondary winding condition is detected. This setting of a flag constitutes storing the result of the process and, therefore, the Examiner is incorrect when stating the claims do not product any tangible results (See pg. 2 of the Office Action). The tangible result is setting the open secondary flag.

To summarize, the claimed invention is statutory subject matter because it falls within the manipulation of data representing physical objects or activities "safe harbor" provision described in MPEP 2106. This is illustrated by the fact that the first example of this type of statutory subject matter described in this section of the MPEP is analogous to the claims as presented. Furthermore, the claimed process produces the tangible result of setting an open secondary flag, which constitutes storing the result of the claimed process for future use, and therefore the claims are directed to statutory subject matter.

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Conclusion

In light of the above remarks, it is respectfully submitted that Applicants have responded in a fully satisfactory manner to all matters at issue in this Application, and that this Application is now in condition for allowance. In this regard, Applicants have made every effort to comply with the requirements set forth in the Final Office Action as well as the statutory requirements. Accordingly, Applicants respectfully request that the Examiner allow the pending claims and pass the Application to issue. If the Examiner believes that personal communication will expedite prosecution of this application, he is invited to telephone the undersigned at (248) 433-7570.

The Patent Office is authorized to charge or refund any fee deficiency or excess to Deposit Account No. 04-1061.

Prompt and favorable consideration of this response is respectfully requested.

Respectfully submitted,

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